

FOR YOUR PROTECTION

1. Never reverse locomotive without stopping it first. To do so may damage the locomotive engine.
 2. Never connect locomotive to AC terminals of your TECH IITM LOCO-MOTION 1500. This may damage your locomotive motor.
 3. Turn power switch off at end of day's operation.
 4. When a short circuit or current overload occurs and circuit protector trips, turn the TECH IITM LOCO-MOTION 1500 off and correct the short or overload. Allow 2-5 minutes for the thermal circuit protector to reset before turning your unit back on.
 5. Avoid prolonged overloads and short circuits. While your TECH IITM LOCO-MOTION 1500 is equipped with several safety devices to prevent accidental damage due to short circuits and overloads, it is unwise to subject it to these frequently or often.
 6. Do not store in damp area.
 7. For best performance, keep wheel and track surfaces clean. Intermittent and "jerky" operation are often caused by an oxide coating which has formed on the track or wheels.
 8. Before returning your unit for repair or servicing, make certain it is defective. Do not shut down your layout unnecessarily.
 9. If it is necessary to return your unit, repack it in its original carton and then in an outer carton, placing at least four inches of packing material on each side. Mail the unit to:
MODEL RECTIFIER CORPORATION
80 Newfield Avenue
P.O. Box 6312
Edison, N.J. 08818-6312
- Be certain to send the unit Parcel Post insured or United Parcel Service, and include a letter with your name and address printed clearly, describing the problem you are experiencing.

All of us at MRC would like to join in wishing you many happy years of model railroading with your new TECH IITM LOCO-MOTION 1500.

MODEL RECTIFIER CORPORATION

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INS-1283

CAUTION - ELECTRICALLY OPERATED PRODUCT.

NOT RECOMMENDED FOR CHILDREN UNDER 8 YEARS OF AGE.
**AS WITH ALL ELECTRIC PRODUCTS,
PRECAUTIONS SHOULD BE OBSERVED DURING HANDLING AND USE
TO REDUCE THE RISK OF ELECTRIC SHOCK.**

INPUT - 120VAC 60HZ OUTPUT-22VDC, 17VAC, 20VDC TOTAL- 12VA



OPERATING INSTRUCTIONS FOR MODEL 1500 CONGRATULATIONS!

You have just purchased one of the most advanced train controls on the market. MRC's new TECH IITM LOCO-MOTION 1500 with Proportional Tracking Control™ (PTC) is the latest in powerpack technology. PTC is a new system developed by MRC that allows a tight connection between locomotive and power pack. The result is a level of performance previously unattainable. The TECH IITM LOCO-MOTION 1500 is a high power non-momentum version of the TECH IITM Series and includes such features as advanced momentum version of circuitry, pump type spring loaded brake, high grade, Noryl® thermoplastic housing, human engineered controls, and much more. As you operate your layout with the new TECH IITM LOCO-MOTION 1500, you will grow to appreciate the engineering and thought that went into its design. The tight connection between the power pack and locomotive, and the realism, will impress you and satisfy the most avid railroader. As always, our old friends will expect and receive the best in quality and performance. If this is your first purchase of an MRC product, we wish to welcome you to the ever growing ranks of those who purchase and use the best in Model Railroading Power Supplies; MRC.

®Registered Trade Mark of General Electric Corporation.

Model Rectifier Corporation
80 Newfield Avenue, Edison, NJ 08837
(732) 225-6360

SPECIFICATIONS:

INPUT – 120VAC, 60Hz

OUTPUT – 22VDC, 17VAC, 20VDC – All no load ratings

TOTAL OUTPUT – 12VA

PULSE FREQUENCY – 60 Hz

CONTROL SYSTEM – MRC'S PROPORTIONAL TRACKING CONTROL

SLOW SPEED CONTROL – Extremely slow speed control is accomplished by the use of Automatic Pulse Injection. Pulses gradually disappear when they are no longer needed.

MOUNTING – Your TECH IITM LOCO-MOTION 1500 may be placed on a flat surface during operation. Its operating panel is human engineered for most comfortable operation. Built-in feet allow cooling space underneath the unit. If you wish to mount your TECH IITM LOCO-MOTION 1500, we suggest you use the drawing below to layout the mounting locations. Drill 5/32 inch holes where indicated and install 1 – 1/4 inch long 8-32 screws from the bottom. A nut should be placed on top of the screws and tightened. If you follow this template, the holes in the bottom of the TECH IITM LOCO-MOTION 1500 will fit neatly on the remaining length of the screws. In order to move the unit, just lift it off the screws and you can move it to another location.



CONTROLS

MASTER SWITCH – The master on-off switch disconnects the input power from your TECH IITM LOCO-MOTION 1500 and shuts the unit down completely.

DIRECTION SWITCH – The direction switch reverses the polarity of voltage applied to the track and thereby reverses the direction of your locomotive. This switch should only be operated when the locomotive is not moving.

MOMENTUM SWITCH – The momentum switch in your TECH IITM LOCO-MOTION 1500 allows operation in either of two modes. With the switch in the off position a change in the throttle setting results in an immediate change in locomotive speed. With the momentum switch in the on position the locomotive moves slowly and gradually like a real locomotive. This switch can add substantially to your model railroading enjoyment. When a real locomotive is given an increase in throttle setting there is a lag until the pre-set speed is reached. The heavier the load of cars being drawn the longer the lag time or delay. Similarly, when braking a real locomotive, a considerable distance is needed in order to stop. Since lightweight models do not mimic this delay on their own, momentum circuitry, as in this pack, is used to create it electrically. Different rates of acceleration can be obtained by varying the maximum position of the throttle. Setting

the throttle to "100" will produce fairly rapid acceleration, "90" more gradual, and so on.

PUMP TYPE BRAKE – The brake in your TECH IITM LOCO-MOTION 1500 is a spring loaded slide switch. To operate the brake, move the switch to the on position and hold it there. Your locomotive will slow at a steady rate. If your throttle was left at a setting other than 0 releasing the brake will cause the locomotive to gradually accelerate to the speed determined by the throttle setting (as long as the momentum switch is on). Pumping the brake will allow for more gradual deceleration.

THROTTLE CONTROL – The throttle is used to set the speed of the locomotive you are controlling. With the momentum switch in "off", your locomotive will immediately accelerate to the speed dictated by the throttle. In momentum "on", however, the brake should be applied to slow the locomotive. If brake is not applied, but the throttle is turned down, the train will very, very slowly coast to a stop, just like a real train.

INDICATORS

POWER MONITOR – The power monitor is used to give an approximate indication of output voltage. You will find this very useful in detecting shorts, opens on your track, etc. If the throttle is left in an "on" position and the light intensity increases as the locomotive continues to run, this indicates less current is being drawn. If the light becomes less intense, more current is being drawn. If the light goes out suddenly this indicates a short circuit. A slight flickering of this light during operation is normal and does not indicate a problem.

TERMINALS

VARIABLE DC – These terminals are for attachment of your TECH IITM LOCO-MOTION 1500 to the main line of your layout. If the direction of your locomotive does not match the position of the Direction Switch, simply reverse the wires going to these terminals.

ACCESSORIES AC – These terminals supply AC voltage for use with AC accessories. Polarity does not matter.

FIXED DC – These terminals supply DC voltage for use with Cab Controls and DC accessories.

NOTE: When connecting to any terminal, care must be taken that wires do not touch more than one terminal at one time. Loose wires are a danger to your unit and layout; be certain wires are properly wrapped around terminal before tightening screws.

PARENTS, PLEASE NOTE: As with any electrically operated unit, it is always best to periodically examine it and have repaired or replaced any potentially hazardous part.